

Prevention, early detection and control of open-burning in oil palm plantations

1.0 Introduction

Open-burning carried out during land clearing and replanting of oil palm especially on peat areas is one of the main causes of the annual transboundary haze problem in the region.

While larger plantations are able to carry out the “zero-burning policy” for their new plantings and replantings, smallholders and small growers are often unable to practice zero-burning due to financial constraints. Open-burning is also seen by smallholders as a means to improve soil fertility and reduce the need for fertilizers.

Fires that are often started on smallholdings, neighbouring larger estates on peat during dry season can spread to adjacent plantations by wind or underground burning when the water-table is low. It is therefore important that Apical’s suppliers take the initiative to educate and assist smallholders and small growers to practice zero-burning.

It is important to closely monitor weather patterns, using the Provincial Meteorological Department, and prepare for dry seasons exacerbated by the *El Nino* effect.

This document aims at providing a practical guideline for Apical’s suppliers to prevent and manage open-burning and to avoid accidents that may result from it.

2.0 Preventive measures to avoid open-burning before the onset of a dry season

2.1 Before the onset of a dry season, it is important to increase the awareness of all field workers, contract workers, villagers, FFB dealers and suppliers to the mills and nearby smallholders through face to face engagement to explain the dangers of open-burning and the importance of early detection and prevention of fire especially in peat areas.

- 2.2 Workers should be warned against any activities that carry a risk of starting fires, for example: cooking in the field and discarding of burning cigarette butts in peat estates.
 - 2.3 Smallholders and villagers should be encouraged to immediately report to the estate management any detection of early fire.
 - 2.4 Put up easily visible and understandable “Fire Hazard” and “Do Not Burn” warning sign-boards within the plantation and along the perimeter of plantation areas, especially next to smallholder areas and villages.
 - 2.5 Build fire monitoring towers (one to every 500 ha) at strategic locations (particularly important in peat areas).
 - 2.6 Set up and train fire patrol teams in the plantations.
 - 2.7 Check water reserves / storage in the plantations. Where necessary, construct new water storage ponds, both for drinking and fire-fighting.
 - 2.8 In peat areas, block all main drains and collection drains to retain / conserve water.
 - 2.9 Form firefighting brigades and implement training using fire extinguishing simulations (fire drills) at least once a month during the dry season.
 - 2.10 Ensure fire-fighting equipment and portable water pumps are in good working order. Check the condition of the fire-fighting equipment once a month.
 - 2.11 Where the availability of water is poor, hand-held fire-fighting tools like rakes, swatters and hoes must be kept in stock.
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- 3.0 Steps to be performed for prevention, early detection and control of open-burning during a prolonged dry season**
 - 3.1 Repair or replace immediately any fire-fighting equipment that is in poor condition.
 - 3.2 Maintain in a good condition all fire monitoring towers and perform schedule of routine fire patrols.
 - 3.3 Carry out more fire patrols in peat areas during a prolonged dry season, at least twice a day (once around midday and once around midnight).

3.4 Fire patrol team members or estate workers must be instructed to report immediately to their field supervisor (who will inform the chief of fire brigade) if they detect any fire on the plantation or on nearby lands.

3.5 Brief all field staff, supervisors, fire brigade and security guards about actions needing to be taken in case of any detection of fire.

4.0 Steps to be performed when an open-burning is detected / reported

4.1 Estate Manager must immediately deploy fire brigade to extinguish the fire as soon as possible, without delay.

4.2 Undertake steps to prevent the fire spreading, for example by constructing isolation trenches of about 1-1.5m depth to prevent fire from spreading into neighbouring blocks.

4.3 If the fire is too big to be extinguished, then immediately call for help from the local government fire brigade.

4.4 Ensure the hotspot has been completely extinguished, to prevent the spread of fire to adjacent areas.

4.5 Public relations staff must immediately report the fire incidence to the authority.

4.6 Ensure to obtain "Receipt of Report" from Police as evidence that the company has reported the case of fire on its plantation;

4.7 All cases of plantation open-burning must be properly documented and filed.

5.0 Steps to be taken after plantation open-burning has been extinguished

5.1 Continue frequent fire patrol in the affected and nearby areas for several days to make sure the fire is completely extinguished.

5.2 Carry out a field census on the number of palms affected by the open burning in the plantation.

5.3 Do not immediately remove the burnt palms.

5.4 Allow 3-4 weeks to see if any new fronds emerge. If 1-2 new fronds appear, the palm will survive.

5.5 Bring up the water level in the burnt peat area to about 50 cm from the peat surface.

- 5.6 Fertilize the recovering palms with 500 gm urea / palm to speed up recovery.
- 5.7 Supply / replace all dead palms during the wet season.